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NAMES.

THERE might be much amusement in tracing the origin of family names. Long ago—say about six or seven hundred years since—there were no family names at all. People had Christian names and nothing more, and of course there was often considerable difficulty in distinguishing individuals. Such at present is the case in Turkey, where the old eastern practice of using but a single name continues to be followed. Surnames were not introduced into England until after the Conquest. The fashion of using two names came to us from France, but for a time was confined to families of distinction, and extended slowly over the country. One thing is said to have promoted its use. Young ladies of aspiring tastes declined to marry gentlemen who had only a Christian name, such as John or Thomas, for they would necessarily have still to be called by their own name, Mary, Elizabeth, or whatever it was. Spinsters accordingly thought it to be a grand thing to form an alliance with a person possessing the distinction of a family name, by which they should ever after be called.

Curiously enough, so difficult is it to alter old usages, that until very lately surnames were scarcely used among the humbler classes of people in some parts of Great Britain remote from centres of civilisation. In these places, a creditor would enter the name of his debtor in his books as John the son of Thomas, just as you see genealogies in the Old Testament. Only now, from improved communication with the outer world, have practices of this kind gone out of use. We can easily understand how the names ending in *son*, as Johnson, Thomson, Manson (abbreviation of Magnusson), originated; and it is equally easy to conjecture how names from professions, such as Smith, Miller, or Cooper came into existence. It is equally obvious that many family names are derived from the nature of the complexion of individuals, as Black, Brown, and White.

At first sight, there is a mystery as regards the different ways in which certain names are spelled.

Smith is sometimes written Smyth; and in some instances Brown has an *e* at the end of it. We see the name Reid spelled as Reade, Reed, and Rede. We see Long, Lang, and Laing, all variations of one name. The same thing can be said of Strong, Strang, and Strange; of Little and Liddle; of Home and Hume; of Chambers and Chalmers; and so on with a host of surnames in daily use. The mystery which hangs over various spellings is cleared up on a consideration of the indifferent scholarship which prevailed until even the middle of the eighteenth century. Names in old legal documents and in the inscriptions on the blank leaves of family Bibles, are written in all sorts of ways. A man seldom wrote his name twice in succession the same way. Each member of a family followed the spelling suggested by his own fancy, and added to or altered letters in his name with perfect indifference. Eccentricities of this kind are still far from uncommon in the signatures of imperfectly educated persons. There is, in fact, a constant growth of new names, springing from ignorance and carelessness, though also in some cases from a sense of refinement.

Perhaps there is a still more vigorous growth of names from foundlings. Driven to their wits' end to invent names for the anonymous infants thrown on their bounty, parish authorities are apt to cut the matter short by conferring names that are suggested by the localities where the poor children were picked up. A child found at a door will be called Door, and so on with Street, Place, Steps, Basket, Turnstyle, or anything else. Hundreds of droll names are said to have begun in this way. Possibly it was from such origin as this that a respectable citizen of Dublin, mentioned by Cosmo Innes in his small book on Surnames, derived the name of Halfpenny. Mr Halfpenny, it is stated, 'throve in trade, and his children prevailed on him in his latter years to change the name which they thought undignified; and this he did chiefly by dropping the last letter. He died and was buried as Mr Halpen. The fortune of the family did not recede, and the son of our

citizen thought proper to renounce retail dealing, and at the same time looked about for a euphonious change of name. He made no scruple of dropping the unnecessary *h*; and that being done, it was easy to go into the Celtic rage, which Sir Walter Scott and the *Lady of the Lake* had just raised to a great height; and he who had run the streets as little Kenny Halfpenny came out at the levées of the day as Kenneth MacAlpin, the descendant of a hundred kings.'

The assumed name of MacAlpin brings us to the whole order of Macs, now spread out in all directions. Mac is the Gaelic equivalent for son, and accordingly Mr MacAlpin would in an English dress be Mr Alpinson. There happen to be two distinct classes of Macs, those with a Highland origin, such as Mackay, Macpherson, Macgregor, Macneil, Macfarlane, Macleod, and Macdonald—all great clans in the olden time; and the Macs of Galloway, where Gaelic is now extinct, and the races are somewhat different from the Highland septs—perhaps with a little Manx and Irish blood in them. Among the Galloway Macs are found the names Macclumpha, Macletchie, and MacCandlish, which evidently do not sound with the true Highland ring. The Irish have likewise their form of expression for son. They use the single letter O, as O'Connell and O'Donell. The O, however, signifies grandson, as it continues to do in the old Lowland vernacular in Scotland, where an aged woman in humble life may be heard saying of her grandchild, 'That is my O.' Prefixes or terminations for son are common among names in every civilised country in Europe.

As is well known, the Norman Conquest gave a new character to English names. From that time many of the most notable of our surnames are to be dated, not only in England, where the Conquest made itself cruelly felt, but in Scotland, where families of Norman origin gradually effected a settlement by invitation and otherwise. Names traceable to the Norman families are very commonly derived from heritable possessions, and till this day bear a certain aristocratic air, though altered in various ways. Doubtless in the lists of those 'who came over with the Conqueror,' there are innumerable shams; but there are also descendants of veritable invaders. We might, for example, instance the late Sir Francis Burdett (father of the Baroness Burdett Coutts), who traced his origin by a clear genealogical line to Hugh de Burdett, one of the Norman soldiers who fought at Hastings in 1066. That gives a pretty considerable antiquity to an existing family without change of name. On the Scottish side of the Border, we could point to a family, Horsburgh of that ilk, as being not less than eight hundred years old, and always occupying the same lands and possessions. Wallace, Bruce, Dundas, Fraser, Stewart, or to use its French form Stuart, are also Scottish surnames of great antiquity. To these we might add two names now ennobled, the Scotts, Dukes of Buccleuch, and the Kers, Dukes of Roxburghe. We find these various

names meandering through history for six or seven hundred years.

On the original names borne by noted Norman families in England and Scotland, time has effected conspicuous changes. The prefix *de*, which was once held in high esteem, has been generally dropped. There has likewise, in various cases, been what might be called a vulgarising of the names. De Vesci is transformed into Veitch, De l'Isle into Lyle, and De Vere into Weir. Through various changes De Montalt has become Mowat, De Montfitchet sinks into Mushet, De Moravie into Murray, and Grossetête into Grosart. We cannot speak with too much contempt of the mythic fables invented to explain the origin of the names Forbes, Guthrie, Dalryell, Douglas, Naesmyth, and Napier—grand old names, which existed ages before the imaginary incidents that have been clumsily assigned as their commencement.

Any one disposed to investigate the historical origin of British surnames, would find not a little to amuse and instruct by making a leisurely survey along the east coast from Shetland to the English Channel. Every here and there he would alight upon patches of population, whose descent from Norwegians, Danes, Jutes, Angles, and other continental settlers in early times would be unmistakably revealed in their surnames, the colour of their eyes, their complexion, and in their spoken dialect—the very pronunciation of certain letters; for the lapse of centuries and innumerable vicissitudes have failed to obliterate the normal peculiarities of their origin. Strange, indeed, is the persistency of race. We have heard it stated as a curious and little known fact, that on the west coast of Scotland there are families descended from the wrecked crews of the Spanish Armada, who scrambled ashore now nearly three hundred years ago. Herein, as we imagine, lies a mine of ethnographic lore, which in the cause of science and history would be not unworthy of exploration. A stretch within the Scottish Border would likewise not be unproductive. On the eastern and middle marches will still be found the descendants of the Eliots and Armstrongs who are renowned in the *Border Minstrelsy* of Scott; the Grahams in the *Debatable Land*; and on the west the Johnstons (with their cognisance of the winged spur), the Jardines, and the Maxwells. Are not these living memorials demonstrative of the truth of history and tradition?

The surnames common to Great Britain and Ireland received an immense accession by those religious persecutions in Flanders in the sixteenth, and in France in the seventeenth century, by which hosts of intelligent and industrious foreigners were forced to flee for their lives. The prodigious immigration from this cause, and to which has to be attributed much of our manufacturing prosperity, has seldom been seriously thought of. A painstaking account of this interesting invasion of Flemish and French artisans has lately been written by Mr Smiles,* which may

* *The Huguenots: their Settlements, Churches, and Industries in England and Ireland.* By Samuel Smiles. New and Revised Edition. Murray, London, 1876.

be advantageously consulted on the subject. We do not go into the religious part of the question, further than to say that the expulsion of so many skilled labourers in the useful arts was a terrible blunder, which we can imagine has been long since repented of. Our concern being principally with the names of the refugees, we shall run over a few items, taking Mr Smiles as our authority. Speaking of the lace-manufacturing towns in the west of England, which had been enriched by the ingenuity of Flemish settlers, he says: 'Such names as Raymond, Spiller, Brock, Stocker, Groot, Rochett, and Kettel are still common; and the same trades have been continued in some of their families for generations.' Some Walloon refugees, cloth-makers, named Goupés, settled in Wiltshire three hundred years ago, and there their descendants are still, but with the name changed to Guppys. From the De Grotes, or Groots, a Netherlandish family, sprung the late George Grote, the eminent historian of Greece. The Houbbons, who gave the Bank of England its first governor, the Van Sittarts, Jansens, Courtens, Van Milderts, Deckers, Hostes, and Tyssens, were all descendants of Flemish refugees. 'Among artists, architects, and engineers of Flemish descent, we find,' says our author, 'Grinling Gibbons, the wood-sculptor; Mark Gerard, the portrait-painter; Sir John Vanbrugh, the architect and play-writer; Richard Cosway, the miniature-painter; and Vermuyden and Westerdike, the engineers employed to reclaim the drained land of the Fens. The Tradescants, the celebrated antiquarians, were of the same origin.'

Driven from the Netherlands by the intolerant policy of the Spanish authorities, who had possession of the country in 1555, the Flemish refugees with their descendants had been residing in England for several generations, when there occurred a fresh accession of immigrants on the score of religion. These were the families who, under prodigious difficulties, felt themselves obliged to flee from France in consequence of the revocation of the Edict of Nantes by Louis XIV. in 1685. These unhappy people escaping across the Channel in open boats, or anyhow, arrived on the coast of England and Ireland to the number of fifty thousand. They brought no money with them; but animated by an immense spirit of industry and independence, their presence was more valuable than untold gold. Settling in London and other quarters, there are till this day innumerable traces of their names in the general population. We might instance the names Baringer, Fourdrinier, Poupert, Fonblanque, Delaine, Payne, Paget, Lefanu, La Touche, Layard, Maturin, Roget, D'Olier, Martineau, Romilly, Saurin, Barbauld, Labouchere, and Garrick, whose real name was Garrigue—all of Huguenot origin. The names of French refugees who introduced silk-weaving into England are now to be seen in Spital-fields, where also a few of their mulberry trees still survive. The town of Portarlinton, in Ireland, was entirely peopled by French exiles, and continues to bear traces of the original names. We are informed that a taste for cultivating flowers was spread through a number of the English towns by the French refugees. Silks, ribbons, lace, gloves, hats, glass, clocks, watches, telescopes (by Dollond), and paper were among the manufactures which they introduced. By the

Revocation of the Edict of Nantes, France appears to have lost all its hatters. Previously, England imported hats from France, but now the French had to import all their hats, at least those of a finer kind, from England.

The original French names were not always preserved by the refugees and their descendants. Becoming Anglicised, their names in several instances assumed an English form, which was not always an improvement. Mr Smiles gives us some examples: 'L'Oiseau became Bird; Le Jeune, Young; Du Bois, Wood; Le Blanc, White; Le Noir, Black; Le Maur, Brown; Le Roy, King; Lacroix, Cross; Tonnelier, Cooper; Le Maitre, Masters; Dulau, Waters; Sauvage, Savage and Wild. Some of the Lefevres changed their name to the English equivalent of Smith, as was the case with the ancestor of Sir Culling Eardley Smith, Bart., a French refugee whose original name was Lefevre. Many names were strangely altered in their conversion from French into English. Jolifemme was freely translated into Pretymian; Momerie became Mummary, a common name at Dover; and Planche became Plank, of which there are still instances at Canterbury and Southampton. At Oxford, the name of Williamise was traced back to Villebois; Taillebois became Talboys; Le Coq, Laycock; Bouchier, Butcher or Boxer; Boyer, Bower; Bois, Boys; Mesurier, Measure; Mahieu, Mayhew; Dronet, Drevitt; D'Aeth, Death; D'Orleans, Dorling; De Preux, Diprose; De Moulins, Mullins; Pelletier, Pelter; Huyghens, Huggens or Higgins; and Beaufoy, Boffy.' Some other conversions are mentioned, such as Letellier into Taylor; De Laine into Dillon; Dieudoun into Dudney; Renalls into Reynolds; Saveroy into Savery; and Levereau into Lever. While such havoc has been played in England with French names, a similar change, though on a less extensive scale, has been made on English and Scotch names in France—witness only Colbert, a minister of Louis XIV., descended from a Scotsman named Cuthbert; and Le Brun, an eminent artist, sprung from plain Mr Brown.

When William Prince of Orange arrived in England in 1688, he brought with him a number of trusty Dutchmen, who in civil and military life so distinguished themselves as to rise to eminence. Among these were William Bentinck, created Earl of Portland, whose son was raised to a dukedom; General Ginkell, who fought manfully at the Boyne, was created Earl of Athlone; and Arnold-Joost Van Keppel, was created Earl of Albemarle, whose descendant now enjoys the title. With George I. there began a number of German names which are now lost in the general population. Far greater additions, however, have been made by the progress of industrial settlement within the last fifty years.

A good feature in the more intelligent classes in England is, that entertaining no grudge at the immigration of foreigners who desire to pursue an honest calling, they receive them hospitably, and willingly hail them as naturalised subjects; for them and their descendants are indeed opened up according to merit the higher offices in the state. As a token of this liberality of dealing, we have only to glance over street directories and see the vast number of names of persons of German, Dutch, French, Swiss, Greek, and Italian origin. We could specify many estimable persons of these

nationalities. But the topic would branch out sufficiently to fill a volume; and the more it is investigated the clearer is the view to be obtained of the manifold changes that have taken place in the tastes and conditions of society. Thanking Mr Smiles in the meantime for the ingenious contribution to the history of surnames, to which we have called attention, the subject is little more than touched on, and we should like to see it treated if possible in a thoroughly comprehensive spirit.

W. C.

THE LAST OF THE HADDONS.

CHAPTER XV.—ROBERT WENTWORTH'S NEWS.

'Do you really think that I ought not to tell Arthur yet, Mary?' whispered Lillian to me later in the day, when she was about to accompany her lover into the garden.

'I should certainly advise you not to do so until we know whether or not the discovery is of any importance,' I replied in the same tone.

'I would so much prefer telling him,' she murmured anxiously.

'I can understand that, dear Lillian.'

'And still you think it best not to tell him?'

'I am only afraid that he might not hold the same views as you do yourself upon the point; and it would only lead to painful discussion, which it is as well to avoid; at anyrate, until you know for certain whether the document is genuine or not.'

Her respect for my opinion proved to be stronger than her respect for his; perhaps because I tried to appeal to her reason as well as to her feelings, and she did not tell him.

The next day passed, and the next, slowly enough to me, in the miserable state of uncertainty I was in, no sign being made by Robert Wentworth. But when another day went by, and then another, the truth began to dawn upon me. He had gone to Scotland to make inquiries on the spot, which proved that what he had learned from Mrs Pratt rendered it necessary so to do; and that everything now depended upon the validity of Mr Farrar's marriage with Marian's mother. Then I saw that it was not right to allow Lillian to go on without some sort of preparation for the blow, which might fall at any moment. It was now my duty to prepare her in some degree for what she had not the slightest suspicion of. If Robert Wentworth's inquiries had brought out the fact that Marian's mother died before Lillian's was married to Mr Farrar, there would not have been the slightest necessity for the journey to Scotland; and his setting forth without delay shewed me that he had grave grounds for believing the document to be a legal one. It was evident that everything now depended upon the legality of that marriage.

'Well, Mary, what is it? news—good news?' asked Lillian, as she entered my room. I had sent a message begging her to come to me after dinner, knowing we should be secure from intrusion there.

'Dear Lillian, what would you consider to be good news?'

'The legality of the marriage being proved, of course,' she answered promptly.

'I have no news, dear Lillian; but—I want to talk the matter over with you a little. I am beginning to get very anxious about not hearing from Mr Wentworth. He must have seen the necessity for going to Scotland; and if the marriage is proved to be a *bond fide* one, I fear'—

'What do you fear, Mary?'

'Dear Lillian, I foresee something which it is extremely painful to think of—something which has not, I think, occurred to you.'

'What is that?' she asked wonderingly.

'I do not like to even suggest it, because all may yet be well. Still it is my duty to warn you that there may be a consequence which you have not anticipated with reference to the'—Some one was tapping at the door, which I had locked, and on opening it, I saw Becky.

'Mr Wentworth has just come, and he wishes to see you by yourself, please, Miss.'

'Where is he, Becky?'

'In the drawing-room, Miss; and I'll see that nobody shall disturb you,' mysteriously whispered Becky, who had, I suppose, received a hint from him that he desired to see me privately.

'Say that I will come immediately,' adding to Lillian, as I hurriedly made my way towards the door again: 'Will you wait for me here a few minutes, Lillian?'

But I had said enough to arouse her fears, though she was still in ignorance as to the cause, and she gravely replied: 'No, Mary; I will go with you. I know now that you are trying to spare me in some way—O Mary! why do you look at me like that?—I *will* go with you and hear the worst!'

Well I knew that he would be as careful in telling her as I could be. And if there was indeed bad news, I should be very glad of his assistance in breaking it to her. We went down together; and one glance at his face, as we entered the room, warned me to expect the worst. His grave words, 'I wished to see you alone for a few moments, Miss Haddon,' confirmed my fears.

'I wished to come—I would come, Mr Wentworth,' said Lillian, slipping her hand into mine; 'and you must please to let me stay, if what you have to say concerns me. You have come to tell us what you have ascertained about the paper I found; have you not?'

I put my arm round her, with a look towards him. She looked from one to the other of us in some surprise.

'Yes,' he hesitatingly replied; 'I have been to Scotland.'

'Then why do you look at me like that? Why are you both so strange? Mary, *you* ought to know there is nothing I should be more rejoiced to hear than that the marriage was a legal one.'

'It is not that, Lillian.—I have guessed aright;

you have been proving the genuineness of the marriage during your absence; have you not, Mr Wentworth?' I asked.

'I grieve to say that there was no difficulty in proving it, Miss Haddon.'

'Grieve! grieve!—when it proves Papa to have acted like an honourable gentleman, instead of — O Mary, you too!' turning from him to me, with a wounded look.

He saw now that the one thing had not yet occurred to her, and turned silently away. He could not strike the blow.

I drew her to a couch by my side, and said with faltering lips: 'I fear that it has not occurred to you that, though it might be better for Marian that her mother's marriage should be proved, it would be worse for you.'

'Worse for me? Is it possible that you can for one moment be thinking about the money? Can you suppose that my father's good name is not more to me than such?—'

'Dear Lillian, I was not thinking about the money,' I slowly replied, with a miserable sickening of the heart as I suddenly realised that the property also was lost. She would be penniless as well as nameless. I glanced towards him again. No; there was no hope!

'Then how can it be worse for me? How can it possibly be worse for me that Papa did right instead of wrong. Please tell me at once what you mean.'

Alas! the more she dwelt upon the honour, the more she was shewing us how terribly she would feel the dishonour! My eyes appealed once more to him for help. But he gravely said: 'Miss Haddon knows what there is to tell, and it will come best from her.'

So it was left to me. I, who loved her most, had to strike the blow. I only put one last question to him: 'Is what I most feared realised, Mr Wentworth?'

He bowed his head in assent, and walked towards the window as I went on:

'Lilian, dear sister—you promised to let me call you that—there is something to be suffered; and though I know you will bear it more bravely than many would, it will be very hard to bear. In your anxiety to do justice to Marian, you did not perceive that—it might bring suffering upon yourself.'

'Doing justice need not bring suffering, Mary.'

'It sometimes may, Lillian. The reward of right doing is not always reaped at the moment.'

'You are not talking like yourself, Mary. What do you and I care about getting rewards! Please tell me at once what I have to bear. I know now that it is something bad; and I know that you are both very sorry for me.'

'The bad news is the date of Marian's mother's death, Lillian. She died when you were about two years old.'

She saw; rose to her feet, and stood for a moment with her hands extended, as though to ward off a blow, and then fell back into my arms.

'Lock the door, please, and help me. She must not be seen by others in her weakness,' I said, placing her amongst the pillows. 'She will soon

be herself again.' Then I bade him throw open the windows, whilst I gently fanned her.

In a few moments she opened her eyes, and struggled to her feet.

'Was it a dream—was it?' she ejaculated, looking eagerly into my face. 'Ah, no!' She was powerless again for a few moments. But she was gaining strength, and presently insisted upon hearing the whole truth from Robert Wentworth's own lips.

He saw that it would be more merciful to comply now; and did so unreservedly. He had been too much interested to leave a stone unturned, although every step he took more plainly revealed what it was so painful to discover. He had taken Counsel's advice upon it, and his own judgment was confirmed: Mr Farrar's marriage with Marian's mother was a legal one, and Lillian's mother had been no wife in the eye of the law.

I may as well state here that Mr Farrar received the paper with his letters to Lucy Reed from Mrs Pratt, after her sister's death, just as they had been found. I thought that it was not at all probable Marian's mother had ever realised her position, or she would have taken steps to secure it. Most probably, Mr Farrar persuaded her that the document was in some way informal. There is just the possibility that he did not believe in it himself; and had gone through the ceremony to satisfy Lucy Reed, whilst she was with him during a tour in Scotland.

Why he did not at once destroy the evidence against himself, when it came into his possession, since he never could have meant to acknowledge the marriage, is difficult to understand in a man of Mr Farrar's calibre—as puzzling as a murderer keeping the evidence of his crime about him. We only know that such things are not uncommon. It might have been that Mr Farrar kept the paper to remind him of Marian's claims upon him, though he never meant them to interfere with Lillian's. The latter's mother was a gentlewoman, young and beautiful. He had gratified both love and ambition in marrying her; and after her death, his love for her child engrossed his whole being. After a few moments' reflection, I said:

'They will be looking after us presently, Lillian. Would you like Mr Wentworth to explain to Mr Trafford?'

'Yes,' she whispered; her trembling hands clinging closer about me. Then, loyal and true to him, she added: 'But remember that I do him the justice to say that the loss of the— Only my shame will trouble him. He has so often wished I had not a penny.'

I could only gather her to my heart, with a look towards him.

His was the hardest task after all! He and I knew that now. He left us alone; and my Lillian and I tried to find strength for what was to come, as only such strength can be found. But Lillian would never be the same again. Her love to her father had been wounded unto death; and I saw that it was her mother—her cruelly wronged mother—who had all her sympathy now. I shall never forget the agony expressed in the whispered words, 'Mother! mother!'

We were not left very long alone. Robert Wentworth could barely have had time to tell the story, when Arthur Trafford came striding in by the open window.

'Good heavens, Lillian! what is this?' he ejaculated impetuously; adding, before she could reply: 'Wentworth tells me that—that you take this absurd affair seriously!'

'Seriously, Arthur?' she repeated, turning her eyes wonderingly upon him.

'I mean: he says you mean to act as though that ridiculous paper were genuine; but surely that is too absurd!'

'Is it not genuine, then?' she eagerly asked, her face for a moment brightening with hope, as she turned towards me: 'Is there any doubt about it, Mary?'

'I am sorry to say that I think there is not, Lillian,' I replied; feeling that it was less cruel to kill her hope at once, than indulge it. 'Mr Wentworth said he had taken Counsel's advice, you know.'

'Oh, I suppose it may be genuine enough for the kind of thing!' he said, with an effort to speak lightly. 'But of course, none in their senses would for a moment dream of acting upon it. At the very best, it would be only a very doubtful marriage, arranged, I daresay, to satisfy a not too scrupulous girl's vanity. The thing is done every day; and I am sure, on reflection, you will not be so Quixotic as to—'

'If the paper is legal, I must do what is right—Arthur,' she murmured in a low broken tone.

'Do you think it would be right to blacken your mother's good name and give up the— All your father wished you to have? The truth is, you have not reflected upon what your acknowledgment of that paper will involve, Lillian. You cannot have given any thought to the misery which would follow. Any true friend of yours would have recommended you to at once put that paper into the fire.—Is that it?' he added, catching sight of the paper which Robert Wentworth had put down on the table before me whilst he was speaking, and which I had neglected to take up. 'Yes, by Jove, and that settles the matter!' catching it up and tearing it into shreds.—'I am your best friend, Lillian.'

'No, no, no! O Arthur, the shame of it!'

'Do not be distressed, dear Lillian; you forget that is only my copy of the original,' I said; 'Mr Trafford is spared.'

He tried to laugh. 'Of course I was only in jest, Lillian. But, seriously now, you should remember that Marian Reed has been brought up to consider herself what she is. But you— It cannot be possible that you would commit an act which would brand your own mother with shame!' He was quick to see what weapon struck deepest, and did not hesitate to avail himself of it.

She shrank under his words, with a low cry. Seeing that he was so blind as to imagine that she would yield through suffering, I sternly said: 'Cannot you see that you are wounding her to no purpose, Mr Trafford? Lillian will do what she believes to be right, come what may.'

'Not if there is no interference—not if she is allowed to use her own judgment, Miss Haddon;' turning fiercely upon me. 'Unfortunately, she has chosen bad advisers!'

'O Arthur!'

'Come out with me, Lillian! I am sure I shall be able to shew you the folly of this,' he pleaded.

'No, no; I cannot change!—Do not leave me, Mary,' she entreated, holding fast to me.

'Dear sister,' I whispered, 'I think it will be better for me to leave you for a few moments. It will be sooner over, and you will find me in the garden presently.' And gently unclasping her hands, I left her alone with Arthur Trafford.

UNDERGROUND JERUSALEM.

As is pretty well known, Jerusalem, the City of David, rendered glorious by the Temple of Solomon, has undergone extraordinary vicissitudes; has been sacked and burned several times, the last of its dire misfortunes being its destruction by Titus in the year 70 of our era, when there was a thorough dispersion of the Jewish race. This ancient city, however, which is invested with so many sacred memories, always revived somehow after being laid waste, but in a style very different from the original. As it now stands, Jerusalem is a comparatively modern town, built out of ruins, and only by difficult and patient explorations can portions of its ancient remains be identified. Of the old memorials the most remarkable are those underground; that is to say, in vaults and obscure places only to be reached by excavation.

The notification of this fact brings us to a brief but we hope not uninteresting account of what in very recent times has been done, and is now doing by the Palestine Exploration Society, by means of extensive excavations, of which a carefully written description is given in Captain Warren's *Underground Jerusalem*.

In February 1867, Captain (then Lieutenant) Warren started for Palestine with three corporals of Engineers, and on the 17th arrived at Jerusalem after a prosperous and uneventful journey. The city does not seem to have struck him as being either picturesque or beautiful. 'It is a city of facts,' he says, 'and but little imagination is required to describe it.' Yet when viewed from the Mount of Olives, with the hills of Judah stretching to the south, and the rich valley of the Jordan glowing like a many-hued gem beneath the vivid sunlight, and the mountains of Moab cleaving with their purple beauty the soft clear blue of the Syrian sky, he does not deny to it a certain charm; but his heart was in his work, and his work lay in the old walls, particularly those which marked the almost obliterated inclosure of the Temple.

This edifice in the latter days of its glory, after it had been partially rebuilt by Herod the Great, was a splendid building. To enable us to realise its gigantic proportions, Captain Warren tells us that the southern face of the wall is at present nearly the length of the Crystal Palace, and the height of the transept. The area within its walls was more extensive than Lincoln's Inn Fields or Grosvenor Square, and the south wall offered a larger frontage and far greater height than Chelsea Hospital. It was built of hard white stone, and was enriched with a variety of coloured marbles, with graceful columns, with splendid gates overlaid with gold and silver, with gilded roofs, and with all the gorgeous detail of costly arabesque and carving. So rich was it in its dazzling magnificence, that it aroused the envy and cupidity of all the nations around, and finally fell with the city it adorned before the conquering arms of Titus. The Roman general tried in vain

to save it; fired in the wild fury of the onslaught, it was consumed to ashes; and its very foundations so obliterated by the superincumbent rubbish, that for ages its precise site has been unknown. In fact the only sites in Jerusalem which were known with absolute certainty were the Mount of Olives and Mount Moriah. Now, in consequence of the discoveries made during the course of his excavations, Captain Warren has been able to identify the walls of the Temple and to make a plan of its courts. He has also found the spot where the little Hill of Zion formerly stood, the Valley of the Kidron, and the true position of the Vale of Hinnom; but to accomplish all this he has had many difficulties to contend with, quite apart from the necessary labour attending the excavations. The civil and military pachas did all in their power to hinder him, and would not allow him to begin to dig at all until a firman from the Sultan arrived authorising his operations. In the interval of enforced leisure, before the Vizier's permission arrived, he paid some necessary visits in Jerusalem, and then made arrangements for a tour in the lonely wilderness country which stretches to the east of the city.

A camp-life, we are told, is at once the most healthy and the most enjoyable in the East. In summer, the domed houses of Jerusalem are intolerable from heat and unpleasant odours; but out on the wide open upland, with a good horse, galloping along the dewy plains in the fresh exhilarating morning breeze; or stretched at night on a carpet of wild-flowers, lazily watching the pitching of the tent; or following with idle glance the myriads of bright-hued birds that dart like rainbow-tinted jewels from branch to branch of the fragrant wild myrtle—there is no land like Palestine for enjoyment. Look where you will, the view is interesting; that village nestling on the hill-side is Nain—the Fair; that picturesque rounded hill clothed to the summit with wood is Tabor; yonder dazzling snow-crowned mountain is Hermon; and far off in the hollow of the plain, silent and still, you may see gleaming in the sunshine the sullen waves of that mysterious Sea that ages ago ingulfed the guilty Cities of the Plain. Around you, too near sometimes to be pleasant, are the black tents of the Bedouin, true sons of the desert, whose wild life has a zest unknown to the courts of kings: greedy of bakshish, arrant thieves, and utterly reckless of human life, the Bedouins can be very unpleasant neighbours; and Captain Warren conceived, probably with truth, that the Bedouin encamped near him had all the will to be troublesome, but fortunately lacked the power.

Having examined the aqueducts which anciently brought water to the Pools of Solomon, Captain Warren visited and explored a curious cave at Khureitîn, or rather a series of four caves opening into each other, which appeared to him to be the veritable Cave of Adullam, where David and his band of malcontents found refuge.

Permission from the Grand Vizier having arrived, and the necessary interview with Izzet Pacha being over, the excavations were at once begun, and then the magnitude of the proposed operations was for the first time fully realised by Captain Warren. He had heard vaguely that modern Jerusalem was built upon sixty feet of rubbish; but he found that the layers of accumu-

lated debris extended to one hundred and thirty, and sometimes two hundred feet in depth. For workmen, he had the peasantry around, who were unaccustomed to the use of the spade and barrow. They worked only with the mattock, and used rush-baskets for carrying out the earth. Another obstacle to progress was the want of wood; not a plank was to be obtained except at a fabulous price. In spite of all these difficulties, however, he discovered in the first four months a portion of the ancient city wall; he identified the real Kidron Valley, which runs into the present one, and is choked up with rubbish to the depth of one hundred and fifty feet; and ascertained that the present brook Kidron runs one hundred feet to the east of, and forty feet above the true bottom of the stream. Thus it would seem that the desolate inclosures of modern Jerusalem, its paltry and yet crowded bazaars, and its gloomy narrow streets, entomb with the beauty and glory and hallowed memories of the past, even those landmarks of nature which we are accustomed to consider most changeless and imperishable. Beneath its wastes lie forgotten valleys and hills, streams which have ceased to flow, and fountains which have long been empty and sealed.

Having obtained the necessary apparatus from England, Captain Warren sunk shafts into the mounds of ruin near Jericho; but found only a few jars of ancient pottery, which crumbled into dust whenever they were exposed to the air.

It was now April, the loveliest month in the Syrian year, and the valley of the Jordan, which a few more weeks would transform into a parched brown desert, was in all the flush and glory of its green luxuriance. The wide plain glowed in the tender flush of the dawn like one vast emerald, while countless flowers unfolded their dewy petals, rich with rainbow tints of beauty, as if Iris were about to weave a gorgeous mantle for the departing summer; while hurrying onward to its dark mysterious Sea rushed the rapid river, its waters gleaming like crystal through the flowering branches of oleander which fringed its banks.

When out on this expedition, Captain Warren made the acquaintance of the Samaritans at Nâblus, and saw them hold their Passover in front of their ruined temple on Mount Gerizim. It was a striking scene, such as the gloomy brush of a Rembrandt might have loved to paint. As night darkened down over the landscape, it lent to the rugged wildness of the surrounding scenery a dim indistinctness, which gave vastness to its savage outlines; while in the foreground, tall ghoul-like figures in long white robes flitted about from one reeking oven-mouth to another, watching the sacred Passover lambs as they were in process of being roasted or rather charred with fire; while the moonlight straggling through the mist mingled with the smoky glare of the torches, and lit up from time to time the dark keen wily faces of the worshippers, crafty and yet fierce, expressive of the mingled courage and guile with which, although few in number, despised and demoralised, they have yet held and still hold their own.

The portions of the plain of Jordan at present under cultivation are very limited, and the crops raised consist of wheat, cucumbers, and tobacco.

During this tour Captain Warren had for guide or guard a certain Sheik Salah, who he says 'was really a good fellow; and if he had not talked

so complacently of marrying an English wife, I should have felt quite friendly to him. This was his hobby. He had a great desire to go to England for this purpose; evidently supposing that he had only to appear there to take his choice of the first in the land.

After three months of wandering through the country, Captain Warren returned to Jerusalem, to find fresh difficulties staring him in the face. The Turks did not keep faith with him; and he was obliged to prosecute the dragoman of the English Consulate, who had imposed upon him.

On the 10th of September his right-hand man, Sergeant Brattles, was taken into custody; and concluding, like the Apostle Paul, that he was a citizen of no mean nation, he refused to walk out of prison, when asked to do so, until the charges against him were investigated. This ended in his speedy release; and the works went on, resulting in the discovery of the gymnasium gardens built by Antiochus Epiphanes, the pier of the great arch destroyed by Titus, and a very ancient rock aqueduct, which was found to be cut in two by the wall of Herod's Temple. An old arch was also discovered, which Captain Warren conceives to be a portion of a bridge connecting Solomon's palace with the eastern side of the valley. Extending their researches by means of the rock-cut aqueduct, they were so fortunate as to find also an old drain, through which they crawled, and examined the whole wall as far as that well-known portion of it commonly designated 'The Jews' Wailing-place.' This aqueduct was so large that a man mounted on horseback might have ridden through it, and proved of great service to the exploring party until they found it cut through by the foundations of a house. During this month also they discovered the great south wall of the Temple. It has two entrances, known as the Double and Triple Gate; and besides these a single gate with a pointed arch was discovered leading to the vaults called Solomon's Stables. These vaults are of comparatively recent date (of the time of Justinian); but it struck Captain Warren that this single gate being at a place where the vaults were widest, was probably over some ancient entrance. He sunk a shaft beside it, and after much labour succeeded in clearing out an ancient passage lined with beautifully cut stones, with a groove at the bottom cut for liquid to flow along. This he concluded was the channel for the blood of the beasts slain in sacrifice, and he wished to push forward straight to the altar and ascertain its position, but was forced to desist by the opposition of the Turks. To this was added money difficulties, from which he was soon happily relieved, and enabled with a light heart to begin excavations within the area of the Temple. On the south-west side there is a double tunnel called the Double Passage, which is one of the most sacred of the Moslem praying-places. With great difficulty and only by a ruse, this hallowed spot was at last examined; but nothing of importance was obtained from it. The same may be said of a remarkable expedition into a sewer, which was certainly plucky, even heroic, but barren of any great result.

Aqueducts appear to be the order of the day in underground Jerusalem. Near a curious double rock-cut pool, which Captain Warren conceives to be the Pool of Bethesda, a rock-cut passage was noticed by Major Wilson filled with moist sewage.

It was four feet wide, and had five or six feet of sewage in it when Captain Warren and Sergeant Brattles examined it. They accomplished their perilous voyage by means of three doors, taking up the hindmost as they advanced; and being everywhere obliged to exercise the greatest caution, as a single false step might have precipitated them into the Stygian stream below, which would have proved to them a veritable Styx; for once in, nothing could have rescued them from its slimy abyss. Fortunately, no accident occurred; but they discovered nothing beyond the fact that it was one of the aqueducts which had brought water to the Temple from the north.

About this time the Jews began to take a great interest in the excavations. There are on an average about ten thousand of them in Jerusalem, gathered out of every nation under heaven; but the bulk of them are either Ashkenazim (German Jews) or Sephardim (Jews from Morocco). The Sephardim are a dark robust race, with the traditional hooked nose of the Jews; the Ashkenazim are more fragile; and their women are often very beautiful—tall and stately as Sir Walter Scott's Rebecca, with lustrous almond-shaped eyes, black glossy hair, a delicate complexion, and a bloom so vivid that it puts to shame the blush of the damask rose.

It is the custom for all the Jews in Jerusalem to assemble every Friday at their Place of Wailing, under the west wall of the Temple court, there to lament aloud the calamities which have befallen their nation. It is a striking sight to see them at this mournful place of meeting. Differing in nationality, in dress, in language, in intelligence, in rank, they are united only by the curse, which has preserved them through centuries of persecution and exile, a separate and distinct people among the teeming myriads of the earth. There they lie before the curious gazer, old men and youth, matron and maid, prone on their faces on the pavement, or rocking themselves back and forward in their anguish; while the air resounds with their bitter wailing and lamentation, on which sometimes breaks harshly the loud laugh of the careless Frank, or the cold sneer of the haughty Moslem.

In January 1869 Captain Warren received a letter of instructions, directing him to abandon those portions of the work which did not promise immediate results. He had discovered in the Temple inclosure the north wall of Herod's Temple, but found it impossible to follow it up. He also came upon the old wall of Ophel, a portion of the first wall of the city. On stones in this wall were found characters which the most competent judges declared to be Phœnician; and also incised marks, such as are found on the old walls of Damascus and Baalbec.

About this time Lady Burdett Coutts offered to give twenty-five thousand pounds to supply Jerusalem with water, of which there is a great scarcity during the summer season; but the proposal ended in nothing, because the Turkish authorities shrewdly concluded that they would have to pay in the long-run for keeping in good order the aqueducts she restored. The want of water is one of the principal reasons why Palestine is at the present day so sterile and unhealthy. And this want of water is (as in other districts where woods are demolished) caused in a

great degree by the destruction of the forests, and especially of the groves and vineyards which grew on the terraces along the hill-sides. The system of terracing, according to Captain Warren, has the effect of retaining the rain, which falls plentifully at certain seasons of the year, in its natural reservoirs about the roots of the trees and in the hollows of the rocks, instead of allowing it to tumble in wild torrents down the bare hill-sides, and rush headlong to the sea, wasting instead of dispensing all the rich blessings which water alone can give in a dry and thirsty land.

What is wanted, Captain Warren says, to make Palestine again a rich and fruitful country, 'is a good government, a large population, an energetic people, and a sufficient capital.'

Wheat grows luxuriantly in Palestine; and the grapes on the Sandstone formation are as highly flavoured as those of Muscadel, producing in the hill country of Lebanon an excellent wine. Very fine raisins are also dried in the east of Palestine; and the whole country abounds with sheep, goats, camels, horses, and mules. The mutton of Palestine is very poor, owing to under-feeding and to the accumulation of the whole fat of the animal in its enormous tail.

Patches of tobacco are grown; and figs, oranges, lemons, and apricots flourish when they are carefully tended.

Jerusalem is not entirely without the industrial arts: there are seven soap factories; and a considerable traffic in grain, which is altogether in the hands of the Moslems. There are also five potteries, and many people work as stone-cutters and indigo-dyers.

Captain Warren's last work at Jerusalem was excavating an old wall near the large reservoir called Birket Israil. Here he came upon a slit about eighteen inches wide and four inches high, and was naturally very much excited at something so unusual. At last he was upon the eve of some great discovery. This small aperture might perhaps give access to some secret chamber, in which the Ark and utensils hidden from the plundering Romans had lain undisturbed for ages. Here, favoured by fortune, he might perchance find the famous golden vine, which once with its shining clusters twined in gorgeous splendour around the entrance to the Temple. Vain dream! That rich fruitage was gathered hundreds of years ago by the hand of some bold legionary. After infinite trouble, the slit was enlarged so as to give access to the apartment, or rather passage below; and then Captain Warren found one of the most frequent facts—'in his city of facts'—an aqueduct!

Much as he has accomplished as the agent of the Palestine Exploration Society, a great deal yet remains to be done before the Holy City of the past can be disinterred from her sepulchre of centuries. That the work interrupted for the present will be continued at some future time, no one can doubt. Forlorn wasted Jerusalem, although no longer the prize for which rival races contend, is as truly hallowed still by solemn recollections to every thoughtful heart, as she was in the days when mailed Crusader and turbaned Turk fought beneath her walls for the mastery of the Holy Sepulchre. No spot on earth thrills the stranger with such mingled emotion as fills the breast of him who, standing on the Mount of Olives, marks its ancient gnarled trees, and

remembers that there, on the sward beneath their hoary boughs, has echoed and re-echoed often in the mysterious past the footfall of the Saviour of the World.

THE STRONG-MINDED WOMAN.

IN TWO CHAPTERS.—CHAPTER II.

WHEN Earle arrived at the De Lacys' house next day at eleven o'clock by appointment, he was shewn into the library, where he found Miss Stirling alone, busy at needlework. She looked so particularly feminine both in occupation and expression, that Earle fancied the soft gray homespun and crimson ribbon more becoming even than her evening attire. Both were slightly embarrassed as she rose and gave him her hand.

'Where is my sister?' Earle asked, retaining the slim hand in his a moment longer than necessary.

'Oh! you might as easily catch quicksilver as Mrs De Lacy,' said Silvia, smiling. 'She is in and out fifty times an hour. I believe she went to get ready for you.'

'Meantime, I want to ask you a favour,' Earle said, busy with his apparatus. 'I want you to be so very good as to let me have a sitting from you too. I have a board on purpose.'

'But how will you get time?' said Silvia, her colour deepening.

'Oh, I shall have plenty, I fancy, while my legitimate sitter is running in and out. I will keep one beside the other on the easel.'

'I do not wish it kept secret from her,' said Silvia, with the proud honesty of her nature.

'Certainly not; but I want to have your face, if you will let me. I will copy it—for your mother, if I may. Will you give me permission?'

'O yes,' she answered confusedly, 'if you care.'

'I do care,' he said in a low voice; and at that moment the little lady darted in, the *tête-à-tête* was broken, and Earle, with a sigh, resigned himself to his unpalatable task.

He painted as steadily as the volatile nature of his model permitted, though it is not an easy thing to make a picture, worthy the name, of a once pretty meaningless face that has lost the charm of youth without gaining the dignity of matronhood. But he was rewarded for his penance, for after a while Mrs De Lacy was summoned to some *protégée*; and then, with a delightful sense of relief, he put the unsatisfactory labour on one side, and placed instead a clean canvas on the easel.

'Now, Miss Stirling, if you will be so kind, will you take that seat and reward me for the tedious hour I have passed?'

Silvia complied with his request quietly, without any affectation.

The artist became soon deeply absorbed in trying to produce a faithful likeness of the face before him. It was not only the shape of the features, but the expression of the whole, he wished to catch—as much as it could be caught upon canvas.

'I cannot get the mouth to my mind,' said he,

dreamily thinking aloud, as artists do. 'What gives it at once that expression, sweet, arch, firm?'

Silvia started up indignantly. 'Mr Earle! if I am to sit here, at least spare me that sort of remark. Do you think any woman in the world could sit still and bear to hear her face analysed?'

'Do forgive me,' he cried, really distressed. 'Indeed, I did not mean to be impertinent, but I feel I was. We get so in the habit of ignoring the *personality* of the faces before us, through having those stolid paid models to paint from. Please look like yourself again, and forgive me.'

'Well, so I do,' said the 'subject,' with a return of her usual frank sweetness. 'I daresay you think I ought to have got hardened; but I am only a woman, after all, you know.'

'You are indeed,' murmured the artist, as he tenderly touched the curve of the upper lip.

So sped the days Earle spent at the De Lacys', the mistress of the house fondly imagining that he was bent on doing her portrait the fullest justice. At last Earle could not pretend that Mrs De Lacy's portrait required many more touches. One day he said sadly enough, as he and Silvia were alone together: 'It's no use; this must come to an end. I can't keep up the delusion that I want more sittings; so I must bring to a close the happiest hours I ever spent in my life.'

'I am going home to-morrow,' Silvia observed, with her eyes down.

'Going home! are you? And you said I might call; do you remember? Will you ask me again?'

'To be sure you may come; why not?' Miss Stirling answered.

'I will try and look forward to that then, for I do feel dreadfully down in the mouth, I confess, at having come to the last of these pleasant hours—pleasant to me, I mean. I can't hope you have found so much to enjoy in them.'

'O yes,' said Silvia, speaking with frank friendliness; 'we have had a great deal of very interesting talk—when poor Mrs De Lacy was out of the room,' she added with a mischievous smile.

'It is like you and no other woman I ever knew to say so!' he said warmly. 'I want to ask you—I know you will tell me exactly the truth—do you feel now as if I could be a friend of yours?'

'If you care to have a friend in a woman who acts constantly in opposition to your cherished ideas.'

'I have altered many of my ideas since I knew you,' Earle said gravely; 'many, but not all. Still you are better, even when you are doing what I disapprove, than any woman I ever knew.'

'I am glad you tell me the truth,' said Silvia. 'It is the best preparation for friendship. But tell me, what do you disapprove of in me?'

Her face was so gentle and winning as she spoke that he was on the point of saying: 'Nothing in the whole world; only be just yourself;' but Mrs De Lacy came in at that moment, and the words were not spoken.

Wilfred left the house feeling more depressed than there was any reason for. 'What have I made up my mind to do?' he thought. 'I can no longer conceal from myself that I love this woman, who is almost the opposite of all I ever thought to love; and yet I feel a sort of dread in letting this lead me on. Shall we be happy together if she loves me? That is the question I cannot answer. I will wait to see her at home; and then, I suppose I must let "the great river bear me to the main," and take my chance of happiness with the rest.'

Mrs Stirling and three daughters—of whom our friend Silvia was the eldest—lived in a pleasant terrace about a mile from the De Lacys. They were well to do, though not rich, and lived a happy busy life; each having interests both separate and in common. They had many friends, and it was a pleasant sociable house to visit at. Mrs Stirling was still young in mind, and entered into all her daughters' pursuits and interests with active sympathy. One afternoon they were all together in the drawing-room—except the youngest daughter Marian, who had a studio near where she painted every day—when a double-knock was heard; by no means an uncommon sound, and yet somehow, lately, every knock seemed to startle Silvia and bring rather a vivid colour to her face. The servant brought in a card inscribed 'Mr Earle;' and that gentleman followed, with an outward appearance of great coolness, but some inward trepidation.

'Mother,' said Silvia quietly, rising and giving him a cordial hand, 'this is my friend, Mr Earle, of whom I spoke.'

'We are very glad to make your acquaintance, Mr Earle,' said Mrs Stirling, in the same cordial natural way, making room by the fire. 'Silvia told us what a successful portrait you made of her.'

Earle's glance round the room pleased his fastidious taste thoroughly. It was emphatically a *lady's room*, filled with pretty feminine things; and without being in the least untidy, was evidently a room to be lived in and to have 'good times,' as Silvia's compatriots say. Mrs Stirling too, whose tall elegant figure and frank manner were repeated in her daughter's, was a woman of marked refinement and culture. He found out this much in five minutes.

They had plenty to say to each other; the Stirlings seemed to read everything, and to have thought about most things; but there was nothing in the slightest degree pedantic or 'blue-stocking' in their talk. So the chat went on merrily—for Wilfred too was a man who could think—but without much help from Silvia, who was unusually silent. Tea was brought in presently; and as she took her place at the tray, Earle found his eyes constantly straying that way and watching her pretty graceful movements. The mother's keen eyes soon discovered the secret, and she turned her head to conceal an amused smile.

'I was nearly forgetting one of the objects of my call,' said the artist, after paying an unconsciously long visit. 'I brought a copy of Miss

Stirling's portrait to offer for your acceptance. Shall I fetch it? I left it in the hall.'

The picture was brought in; and Mrs Stirling regarded it with exceeding interest.

'It is indeed beautifully done—beautifully!' she said. 'How Marian will enjoy it! It is only much too good for me. You have idealised my Silvia, Mr Earle.'

'Yes; it is shamefully flattered,' said Silvia.

'I don't think so at all!' Earle cried eagerly. 'I am sure it is not in the very least! One tries always of course to catch the best expression, the happiest moment.'

'Well, you must have caught it at a very happy moment,' said Mrs Stirling; and then she was vexed with herself, for she saw that her daughter was vexed. To change the subject, she observed: 'Silvia is going to another Suffrage Meeting on Monday, in ——.'

This did very effectually change the subject. Earle felt a revulsion of feeling that was painful to a degree. 'Indeed,' he responded coldly. 'Will you be at home on Sunday?'

This question, uttered under a sudden impulse, took them all by surprise. He addressed the question directly to Silvia, whose confusion made her stammer out some half-formed words; but Wilfred was quite calm and master of the situation. 'I was going to ask—if Mrs Stirling allows Sunday visitors—if I might call on that day. I particularly want to see you before you go to ——. May I come on Sunday afternoon?'

Silvia had never before felt so utterly at a loss for a reply; but her mother came to the rescue with some polite words; and the artist almost immediately took leave.

'Well, my darling,' said the mother, breaking the pause his departure left. 'What do you think of all this?'

'Mother,' said Silvia with gentle decision, 'I want to ask you, to please me, not to allude to this again till after Sunday.'

On Sunday afternoon—a dull, cold, foggy day enough—Wilfred found his way again to Eagle-mere Gardens. His mind was made up; and his handsome face looked a little set and stern as he paused at the door and asked quietly this time for Miss Stirling. The American custom seemed to him at that moment to be a most respectable one. What an amount of management and finessing it saved, for of course every one knew it was Silvia, and Silvia only, he wanted to see.

He was shewn into a small study; and in a few moments heard a dress rustle down the stair and rather a timid touch on the door-handle. As Silvia came in, Earle's face by the dull light looked to her hard and strange, which did not tend to quiet her nerves. She was very pale, and there was an appealing wistfulness in her eyes as she lifted them to his which went straight to his heart; but he gave no sign. He took her hand, pressed it, and gently placed her in an arm-chair, while he remained standing by the mantelpiece with his head down. Neither had yet spoken; both felt they were touching upon a period of their lives with which common forms had nothing to do. Silvia heard her heart thump, and the clock tick, with painful distinctness: she seemed all ear. All around seemed oppressive silence. At last Earle broke the silence: his

voice had a deeper tone in it than usual, a resolutely suppressed passion vibrated in it.

'Silvia,' he said, 'I am going to speak the very truth to you—as one speaks not often in one's life—you have taken possession of me—against my will almost—I love you as I never loved woman before—I scarcely know myself how deeply. Speak the truth to me as I have done to you. Whether you love me or love me not, I shall never offer to any living woman what I offer to you, for mine is no boy's love. Speak to me, Silvia.'

'I will tell you nothing but the truth,' she said, forcing her voice to be steady. 'I do return your love, I believe I do—though I hardly seem to have shaped it out to myself yet—but—'

'Yes; there is a "but" — I know it. What is your doubt, Silvia? Do not I care for you enough?'

'I believe you do,' she answered softly. 'I believe you must love me very much, because I know it is against your own judgment. But my doubt is—shall we be happy? I know I am not the woman you would deliberately choose for a wife.'

Earle half laughed, though he was terribly in earnest. 'What man in love ever "deliberately chose" a woman for his wife?'

'But should I, could I indeed make you happy?' she said.

'Yes, darling,' he answered, melting into tenderness, and sinking by her chair. 'If you can love me enough to make some sacrifices for me.'

'I should never hesitate to sacrifice anything but duty to one I love,' she said, as he drew her to him.

'Ah, but people have mistaken ideas of duty, often! I want you now, this minute, to give up something I believe you think your duty.'

'What is that?' she asked, drawing away from him.

'I cannot bear to have the woman I love standing up in public to speak before a crowd of vulgar strangers,' he cried, almost fiercely. 'If you love me, Silvia, give this up for me!'

'You mean on future occasions, after we are—'

'No; I mean now, to-morrow: give up this meeting for me, to-morrow!'

'Impossible! I cannot. They are reckoning upon me, and I have promised—'

'You could easily excuse yourself.'

'I will make no false excuses,' cried Silvia with warmth. 'I admit my love for you—but I will never bind myself to what you may choose to demand. If we married, you might trust me to consider your wishes before my own, before everything but conscience; but I will not give way to this exaction—now. I cannot break my promise, and do what I feel to be wrong and cowardly; no, not to be the happiest woman upon earth! And do you think a marriage begun like that would be a happy one? No, no; better be sorry now than then.'

He got up and stood apart from her, gloomily. 'Then you will not? A woman like you is too advanced for the dear old traditions of love!'

'I will never marry a man who is ashamed of what his wife has done,' answered Silvia very low, but calmly.

'My old prejudice was a just one, after all,' said he, with a sigh. 'Good-bye.'

'Need we part so bitterly?' she said tremulously. 'May we not even be friends again?'

'Friends! It is the idlest folly talking of friendship, when one's heart is on fire with love. I could more easily hate you, Silvia, than only be your friend! Good-bye. God bless you, though you have tortured me. God bless you, Silvia.'

In another instant the front-door closed, and Silvia Stirling was alone with a breaking heart.

True to her word, she determined on going to—the next day. She was looking and feeling wretchedly ill, but she would not give it up, and only stipulated that none but a maid should go with her to the station. It was Silvia's way to suffer in silence and alone. She took her ticket, and sank into a corner of an empty carriage with a heart aching to positive physical pain. To her annoyance a gentleman followed her in, and the train moved out of the station. She raised her listless mournful eyes and saw—Wilfred! She turned so white that he threw himself beside her, and in an instant had his arm about her.

'Why, why have you come?' she murmured with dry trembling lips. 'Cruel of you to torture me again!'

'My darling, it is not now to torture you that I have come—only for this—I can't live without you. I thought I could, but I can't. I have been so vexed with myself ever since we parted. Do you think you can forgive me, my sweet! and trust me with yourself after all?'

'Then you will let me—let me'—

'Let you be your own dear self? Yes, Silvia; I ask for nothing better. As long as we know and trust each other, what does it matter what all the world says? I will trust you, dear one. Can you trust me?'

For answer, Silvia put up her lips and met his in a first kiss. Nothing more was needed.

'I am going to shew you,' he said, after a delicious pause, 'that I can be superior even to my prejudices. I have come to take you to this meeting, and to steel myself, for your sake, to what I dislike as much as ever. I could not bear the thought of you alone and sad. I knew you would be.'

'This shall be the last time I do what you dislike,' she murmured softly.

'Don't promise anything,' he interrupted. 'I leave you absolutely free. We will work together and be, as you said, true friends as well as lovers. Are you happy now?'

The honest tender eyes answered the question for her.

Some months after, Mr Roberts received the following note from his old friend Wilfred Earle:

'DEAR JACK—I want you to come and dine with Benedict the married man next Tuesday, and see how happy his "strong-minded woman" makes him. You were right, old fellow! The clever women *do* make the best wives after all. That was a blessed day for me that I went, under protest, to hear my Silvia "spout in public." The spouting days are over now; but I am not ashamed of anything she has done or said. You may laugh at my inconsistency as much as you like; I can afford to laugh too, as I have won something worth winning. Come and judge for yourself, and see your old friend in Elysium, and then go and do the same thing yourself. I can tell you, my wife

knows how to welcome my friends; and I hope you will think she makes her house and mine a pleasant one. *Au revoir*, Jack; and between ourselves—she does not at all object to smoking.

W. E.'

LIME-JUICE.

THE subject of lime-juice has suddenly become one of great public interest. When the chief outlines of the proceedings and experiences of the recent Arctic Expedition appeared in print, much surprise and concern were felt at the sad prostration of so many of the crew by scurvy, the most terrible of all the diseases of maritime life. A Committee of experienced men, old Arctic heroes and medical officers, has been appointed by the Admiralty to investigate the whole subject. We shall of course abstain from all comment or speculation here as to the result; but our readers will not be unwilling to learn something concerning the wonderful effects of *lime-juice*, by contrasting the state of affairs before and since the introduction of that beverage (or rather medicament) as a regular item on ship-board.

Scurvy is a disease concerning which medical men are a little divided in opinion. The relative values of pure air, fresh water, vegetable food, and general cleanliness have not been precisely ascertained. The disease sometimes attacks landsmen under varied circumstances. Martin, who visited the Shetlands early in the last century, found that the inhabitants suffered much from scurvy, which he attributed to the too great use of salt fish. Brand, near about the same period, learned that the Orkney Islanders were often unable to obtain any kind of bread whatever; as a consequence, this dire disease was rife among them. In Von Troil's account of Iceland in the same century, he found that the people lived much upon stale fish, fish livers and roes, fat and train-oil of whales and seals, and sour milk; their clothes were often wet, and the poor folk were constantly exposed to all the hardships of poverty. Such persons supplied the greater number of cases of scurvy in Iceland; those inhabitants who took less fish, sour whey, &c., and ate Iceland moss and other vegetables, were less affected. A singular remedy, or supposed remedy, for those attacked was to bind earth-worms over the blotches, &c. produced by the disease, renewing them as fast as they dried up. The Farøe Islanders suffered much from this affliction at one time; but when the fishing declined and the people began to grow corn, the general health improved. Coming down to more recent times, Ireland suffered from scurvy during the famine years 1846-7; potatoes were almost unattainable, and other kinds of food high in price. Devon and Cornwall were at one time much afflicted in this way during the winter, the disease disappearing when vegetable food became abundant and cheap in spring and summer.

Soldiers and besieged cities have suffered terrible ordeals in this way. When Louis IX. led his crusaders against the Saracens in 1260, the French were much stricken with scurvy, owing to scarcity of food and water and the malarious state of the air. At the siege of Breda in 1625, and at that of Thorn in 1703; in the Hungarian campaign of the Austrians and Turks in 1720; at the siege of Quebec in 1760—the same calamity had to be

borne. Towards the close of the last century, when Bonaparte crossed the Alps into Italy, his troops suffered greatly from this infliction. So did the British troops at the Cape in 1836. The armies on both sides were much afflicted with the malady during the Crimean War of 1854-5.

But it is in maritime life that this dreadful scourge used to be most appalling. It carried off more sailors than all other causes combined—nearly eighty thousand during the Seven Years' War alone. Salt food, absence of vegetables, foul or deficient water, defective cleanliness, mental depression, over-fatigue—some or other of these agencies were always at work. Vasco da Gama had full reason to know the effects of scurvy on his crew during his voyage to the East in 1497. Pigafella, during a voyage near Cape Horn in 1519, was exposed to the evils of biscuit worm-eaten and reduced to repulsive mouldy dust, and scarcely any other kind of food; his crew were attacked with scurvy severely; their gums swelled so as to hide the teeth, and the upper and lower jaws were so diseased that mastication was nearly impossible. All our famous old navigators—Drake, Davis, Cavendish, Dampier, Hawkins—had mournful reason to know how great were the ravages produced on their crews by this distemper.

Perhaps the most sadly celebrated of all voyages, in regard to this particular visitation, was that of Captain (afterwards Lord) Anson. He was placed in command of a squadron bound for the South Seas to act against French and Spanish vessels and settlements. The narrative of his voyage was afterwards drawn up from his papers by Mr Walter, chaplain of the *Centurion*. Setting forth in 1740, his sojourn in foreign regions was a prolonged one. After the squadron had rounded Cape Horn and entered the Pacific, scurvy began to make its appearance among the crews; their long continuance at sea, the fatigues they had undergone, and various disappointments that had had to be endured, all contributed to the spread of the disease. There were few on board the *Centurion* who were free from its attacks. In the month of April forty-three men died. Anson hoped that, as they advanced north, the spread would be checked; but the death-rate was nearly doubled in May. As the ship did not reach port till the middle of June, and as the mortality went on increasing, the deaths reached a number exceeding two hundred; even among the remainder of the crew they could not muster at last more than six foremast-men in a watch fit for duty. To sum up: in the first two years of a five years' voyage, Anson lost no less than two-fifths of the original crew.

Anson's experience shewed that the scurvy was not driven back even when the conditions might seem to have been moderately favourable. 'It has been generally assumed that plenty of fresh provisions and water are effectual preventives. But it happened that in the present instance we had a considerable stock of fresh provisions on board, such as hogs and fowls, which were taken in at Paita; besides which we almost every day caught great abundance of bonitos, dolphins, and albicores. The unsettled season, which deprived us of the benefit of the trade-wind, proved extremely rainy; we were enabled to fill up our water-casks about as fast as they were emptied; and each man had five pints of water per day.

Notwithstanding all this, the sick were not relieved, nor the spread of the disease retarded. The ventilation too was good, the decks and cabins well attended to, and ports left open as much as possible.' Another passage in the narrative tends to shew that the officers were much impressed with this failure of many preventives which are usually regarded as very important. 'All I have aimed at is only to shew that in some instances the cure and prevention of the disease are alike impossible by any management, or by the application of any remedies which can be made use of at sea. Indeed I am myself fully persuaded that when it has once got to a certain head, there are no other means in nature for relieving the diseased but carrying them on shore, or at least bringing them into the neighbourhood of land.'

Thus wrote an observant man in the days when the remarkable qualities of lime-juice were little known. Later in the same century, Captain Cook, owing either to better management or to being exposed to less unfavourable circumstances, or to both causes combined, fared better than Lord Anson. Although he had a little lime-juice, he reserved that for medical cases. He gave his men sweet malt-wort; another article administered was sowens, obtained by long steeping oatmeal in water until the liquid becomes a little sour; and sour-kraut, consisting of slices of cabbage salted, pressed down, fermented, and barrelled—without vinegar. Cook lost only one man from scurvy out of a hundred and eighteen, during voyages that lasted three years, and in oceans that ranged over so much as a hundred and twenty degrees in latitude. Quite at the close of the century, Péron during a voyage of discovery suffered greatly; but everything was against him. Putrefying meat, worm-eaten biscuit, foul water—all tended to produce such a state of matters that not a soul on board was exempt from scurvy; only four, including officers of the watch, were able to remain on deck. The second surgeon M. Taillefer, behaved heroically. Although himself affected, he was employed at all hours in attendance on the rest—at once their physician, comforter, and friend.

And now we come to the subject of lime-juice, a liquid which, on the concurrent testimony of all competent persons, possesses a remarkable power, both in preventing attacks of scurvy, and in curing the disease when the symptoms have already made themselves manifest.

How the discovery arose, no one can now say; probably the fact grew upon men's attention by degrees, without any special discovery at any particular date. That vegetables and fruits are acceptable when scurvy has made its appearance, has been known for centuries past. The potato, for instance, has often been purposely adopted as an article of diet in prisons, on the occurrence of this disease, with good effect—a few pounds of this root being added to the weekly rations. Countries in which oranges and lemons are abundant and cheap have not been much affected with the malady. In 1564 a Dutch ship, bringing a cargo of oranges and lemons from Spain, was attacked with scurvy; the men were supplied plentifully with the fruit, and recovered. Other varieties of the same genus, such as the lime, citron, and shaddock, gradually became recognised as possessing much value in cases of this malady. In 1636 Mr Woodall, a medical officer in the navy, published

his *Surgeon's Assistant*, in which he dwelt forcibly on the great importance of employing fruits of this class. He expressed an opinion that oranges, lemons, and the like, come well to maturity in the intertropical zone where scurvy is most rife, and in a humble thankful spirit commented thus on the fact: 'I have often found it true that where a disease most reigneth, even there God hath appointed the best remedies for the same, if it be His will they should be discovered and used.' It was more than a century later that Dr Lind wrote especially on this subject, emphatically pronouncing that the juice of oranges and lemons is a better remedy for scurvy than any other known medicament. Lord Anson's disastrous experience had drawn public attention to the subject, and more attention was paid to Lind than had been bestowed on Woodall.

Nevertheless, the eighteenth century nearly closed before the English government were roused to action in the matter. To Sir Gilbert Blane is due the honour of inducing the Admiralty to furnish a supply of lime-juice to all ships of the royal navy, especially those starting on long voyages. The effect was wonderful. The records of the Royal Naval Hospital at Haslar, near Gosport, shewed that one thousand four hundred and fifty-seven cases of scurvy were admitted in 1780, whereas in 1806 there was only one single case; the introduction of lime-juice as a regular item in ships' supplies having taken place in the intervening period. Scurvy became quite a rare disease on shipboard; and many ships' surgeons are said to have advanced towards middle life without having seen an instance of it. When Captain Parry organised his expeditions to the icy regions, he was sedulously attentive to this as well as to all other matters connected with the health and well-being of his crews. As he found that some of his men occasionally shirked the lime-juice given out to them, he adopted the plan of mustering them every day, and seeing that every one drank off his due allowance.

When the juice has been obtained by the aid of a screw-press or any other means, it is heavy, cloudy, and sour. A proportion of ten per cent. of spirit is added to preserve the juice from being too much affected by tropical heats, and also to modify the possible effect of too great acidity. The mixture is carefully bottled for sea-use; and the sailors and marines begin to drink it about a fortnight after leaving port. About an ounce a day per man is the usual allowance, often mixed with sugar in their grog; the quantity is increased if any symptoms of scurvy make their appearance. Lime-juice may be preserved in the same way as ripe fruits by placing the bottles containing it in water, boiling for half an hour, gradually cooling, and hermetically sealing. Dr Leach, consulted by the Board of Trade, strongly recommended the use of lime-juice in all emigrant and other passenger ships, and drew up a dietary scale for this purpose. An act of parliament had before that date been passed, directing the adoption of this medicament in the mercantile marine; but the lime-juice supplied by contractors was found to be frequently so grossly adulterated that scurvy began to appear. Whereupon a further statute ordered that all lime-juice should be officially inspected before being placed on shipboard. One ounce daily per head is now a pretty general allowance in all ships alike.

The better class of passenger-ship owners, such as Messrs Wigram, had long before adopted the system, without waiting for any official pressure.

It is now, to sum up, admitted beyond doubt or cavil, that lime-juice is the most valuable of all known agents for warding off scurvy, or for curing when the disease has made its appearance.

In an earlier paragraph we briefly adverted to the fact that a Committee is officially examining into the circumstances connected with the outbreak of scurvy in the *Alert* and *Discovery*. Of course no attempt will be made here to anticipate the result, nor to pronounce an opinion on the question involved. But Captain Sir George Nares has himself made public some remarkable observations on the matter, revealing facts never before so fully known to those who are most directly interested in the subject. In a speech delivered at Guildhall, the gallant officer said: 'No sledge-party employed in the Arctic regions in the cold month of April has ever been able to issue a regular ration of lime-juice. Every commander has desired to continue the daily issue while travelling, as recommended by medical authorities; but all have failed in doing so during the cold weather. In addition to the extra weight to be dragged that its carriage would entail, there is the more serious consideration of the time and fuel necessary to melt it. . . . After the middle of May, when the weather is warmer, lime-juice can be (and was) used as a ration. Of course hereafter lime-juice in some shape or other must be carried in all sledging-journeys; and I earnestly trust that some means will be found to make it into a lozenge; for as a fluid, there is and always will be extreme difficulty in using it in cold weather, unless Arctic travelling is considerably curtailed. Owing to the thaw which sets in before the return of the sledges, in its present state it must be carried in bottles; but up to the middle of May it remains frozen as solid as a rock. If the bottles have not already been broken by the jolting of the sledge or the freezing of the contents, they have to be broken on purpose before chipping off a piece of the frozen lime-juice, as if it were a piece of stone.' Cannot our pharmaceutical chemists come to the rescue, and devise some mode of making lime-juice into small convenient lozenges or dry confections?

'BELL-ANIMALCULES.'

As we write, we look upon a prospect which excites our wonder and interest. The eye sees a variety of form and structure presenting a combination of grace and delicacy hardly to be matched in the whole of Nature's domain. Within the compass of a small round disc or circle, we behold numerous beings, each consisting of a bell-shaped head mounted on a delicate flexible stalk. The margins of the bells are fringed with minute processes, resembling miniature eyelashes, and hence named *cilia*; and these processes wave to and fro with an incessant motion, by means of which particles of solid matter suspended in the water around are swept into the mouth of the bells. Suddenly some impulse moves the beings we are gazing upon to contract themselves, and as if by magic, and more quickly than the eye can follow them, the bell-shaped bodies shrink up almost into

nothingness by the contracting power of their stalks. Soon, however, as the alarm disappears, the beings once more uncoil themselves, the stalks assume their wonted and straight appearance, the little cilia or filaments once again resume their waving movements, and the current of life proceeds as before.

The spectacle we have been describing is not by any means a rare or uncommon one, to the microscopist at least. We have merely been examining a tiny fragment of pond-weed and its inhabitants, floating in a thin film of stagnant water. Attached to the weed is a colony of those peculiar animalcules known popularly as 'bell-animalcules,' and to the naturalist as *Vorticellæ*. Yet common as the sight may be to the naturalist, it affords one example of the many undreamt-of wonders which lie literally at the feet, and encompass the steps of ordinary observers; and it also exemplifies the deep interest and instruction which may be derived from even a moderate acquaintance with natural history, together with the use of a microscope of ordinary powers.

The bell-animalcules are readily procured for examination. Their colonies and those of neighbour-animalcules may be detected by the naked eye existing on the surface of pond-weeds as a delicate white nap, looking like some lower vegetable growth. And when a portion of the weed is placed under the object-glass of the microscope, numerous animalcules are to be seen waving backwards and forwards in all their vital activity. The general appearance of each animalcule has already been described. The bell-shaped structure which, with its mouth turned uppermost, exists at the top of each stem or stalk, is the body. The stalk is never branched in these animalcules; and except in certain instances to be presently alluded to, each stalk bears a single head only. The structure of the stalk is worthy of special mention. The higher powers of the microscope shew us that within the soft substance or *protoplasm*, of which not only the stalk but the body also is composed, a delicate muscular fibre is contained. This fibre possesses the power of contracting under stimulation, just as the muscles of higher animals contract or shorten themselves. And by means of this structure therefore, the bell-animalcules, when danger threatens them, are enabled to contract themselves with great rapidity, the stalk itself shrinking up into a spiral form. The operation reminds one forcibly of some sensitive plant shrinking when rudely touched. The lower extremity of the stalk forms a kind of 'root,' by means of which the animalcules attach themselves to fixed objects, such as pond-weeds, &c.

The bell-shaped body is sometimes named the *calyx*, from its resemblance to the structure of that name in flowers. The edge of the bell possesses a very prominent rim, and within this we find the fringe of filaments or cilia, which in reality form a spiral line leading to the edge of the bell, where at one point is situated the mouth,

represented by an aperture or break in the rim of the body. We have seen that the cilia create miniature maelstroms or whirlpools in the surrounding water, which have the effect of drawing particles of food towards the mouth. The study of the bell-animalcules affords an excellent example of the gaps which yet remain to be filled up in our knowledge of the structure even of the lowest and commonest forms of life. No structures are more frequently met with in the animal world than the delicate vibratile filaments or cilia, so well seen in the bell-animalcules. The microscopist meets with them in almost every group of animals he can examine. They are seen alike in the gills of the mussel and in the windpipe of man; and wherever currents of air or fluid require to be maintained and produced. Yet when the physiologist is asked to explain how and why it is that little microscopic filaments—each not exceeding in many cases the five-thousandth part of an inch in length, and destitute of all visible structure—are enabled to carry on incessant and independent movements, his answer is, that science is unable, at the present time, to give any distinct reply to the query. No trace of muscles is found in these filaments, and their movements are alike independent of the will and nervous system; for when removed uninjured from the body of the animal of which they form part, their movements may continue for days and weeks together. What a field for future inquiry may thus be shewn to exist, even within the compass of a bell-animalcule's history—these animalcules being themselves of minute size, and even when massed together in colonies, barely perceptible to the unassisted sight!

A very simple and ingenious plan of demonstrating the uses of the cilia in sweeping food-particles into the mouths of the animalcules, was devised by Ehrenberg, the great German naturalist. This plan consists in strewn in the water in which the animalcules exist, some fragments of coloured matter, such as indigo or carmine, in a very fine state of division. These coloured particles can readily be traced in their movements, and accordingly we see them tossed about and whirled about by the ciliary currents, and finally swept into the mouths of the animalcules, which appear always to be on the outlook, if one may so term it, for nutritive matter. Sometimes when we may be unable to see the cilia themselves, on account of the delicate structure, we may assure ourselves of their presence by noting the currents they create.

The structure of the bell-animalcules is of very simple and primitive kind. The body consists of a mass of soft *protoplasm*—as the substance of the lower animals and plants is named; but this matter is capable of itself of constituting a distinct and complete animal form, and of making up for its want of structure by a literally amazing fertility of functions. Thus it can digest food; for in the bell-animalcules and their neighbours, the food-

particles swept into the mouth are dissolved amid the soft matter of the body in which they are imbedded. Although the animalcules possess no digestive system, the protoplasm of the body serves them in lieu of that apparently necessary apparatus, and prepares and elaborates the food for nourishing the body. Then we have seen that the animalcules contract when irritated or alarmed. A tap on the slide of glass on which they are placed for microscopic examination, initiates a literal reign of terror in the miniature state; for each animalcule shrinks up as if literally alarmed at the unwonted innovation in its existence. This proceeding suggests forcibly to us that they are sensitive—if not in the sense in which higher animals exhibit sensation, at least in much the same degree and fashion as a sensitive plant. And where sensation exists, analogy would lead us to believe that some form of apparatus resembling or corresponding to nerves exercising the function of feeling, must be developed in the animalcules. Yet the closest scrutiny of the bell-animalcules, as well as of many much higher forms, fails to detect any traces of a nervous system. And hence naturalists fall back upon the supposition that this curious protoplasm or body-substance of these and other lower animals and plants, possesses the power of receiving and conveying impressions; just as in the absence of a stomach, it can digest food.

The last feature in the organisation and history of the bell-animalcules that we may allude to in the present instance is that of their development. If we watch the entire life-history of these animalcules, we shall observe the bell-shaped heads of various members of the colony to become broadened, and to increase disproportionately in size. Soon a groove or division appears in this enlarged head; and as time passes, the head appears to divide into two parts or halves, which for a time are borne by the one stalk. This state of matters, however, does not continue; and shortly one of the halves breaks away from the stalk, leaving the other to represent the head of the animalcule. This wandering half or head is now seen to be provided at each end with cilia, and by means of these filaments swims freely throughout the surrounding water. After a time, however, it settles down, develops a stalk from what was originally its mouth extremity; whilst the opposite or lower extremity with its fringe of cilia comes to represent the mouth of the new animalcule. We thus note that new bell-animalcules may be produced by the division of the original body into two halves. They also increase by a process of *budding*. New buds grow out from the body near the attachment of the stalk; these buds in due time appearing as young Vorticellæ, which detach themselves from their parent and seek a lodgment of their own.

These briefly sketched details may serve to interest readers in a comparatively unknown field of observation, accessible to every one who cares to know something of one of the many life-histories with which our universe teems, but which from their very plenty are seldom thought of or recognised. And the present subject is also not uninteresting if we regard it in the light of a corrective to those too commonly received notions, usually fostered by ignorance of our surroundings, that there is nothing worth attention in the universe but humanity and human affairs.

ADVICE TO YOUNG WOMEN.

In marrying make your own match: do not marry a man to get rid of him or to save him. The man who would go to destruction without you would as likely go with you, and perhaps bring you along. Do not marry in haste, lest you repent at last. Do not let aunts, fathers, or mothers sell you for money or position into bondage, tears, and life-long misery, which you alone must endure. Do not place yourself habitually in the society of any suitor until you have decided the question of marriage; human wills are weak, and people often become bewildered, and do not know their error until it is too late. Get away from their influence, settle your head, and make up your mind alone. A promise may be made in a moment of sympathy, or even half-delirious ecstasy, which may have to be redeemed through years of sorrow, toil, and pain. Do not trust your happiness to the keeping of one who has no heart, no health. Beware of insane blood, and those who use ardent spirits; shun the man who ever gets intoxicated. Do not rush thoughtlessly, hastily, into wedded life, contrary to the counsels of your friends. Love can wait; that which cannot wait is something of a very different character.—*Newspaper paragraph.*

LINES TO THE MEMORY OF THOMAS TYRRE,

A YOUNG EDINBURGH POET OF GREAT PROMISE.

THE fairest flowers that Summer wings
From grassy mound to scent the air—
The leaves that sweetest beauty wear
When from the skies on happy wings
Spring flies to earth—in sad decay
Are first to fall, and fade away.

And like the garden rose that rears
'Mongst lesser flowers its stately form,
But droops and dies before the storm,
When Winter's gloomy face appears—
Yet leaves within Affection's heart
A beauty, that can ne'er depart—

A love, that Death may never claim,
Nor mix with his forgetful gloom
Amidst the stillness of the tomb;
So Memory keeps his honoured name
Within the mind; there shall it be
Till Time shall find Eternity.

His life was like the snowy cloud
That peaceful decks the evening sky,
And fills with love the gazer's eye;
But when the voice of thunder loud
Commands, it finds an early doom,
And disappears amongst the gloom.

Or like the snowy-crested wave
That sweeps along the sounding shore
In sunshine, then is seen no more,
Was his sweet life that early gave
Its noble soul to Him who lives
For aye, and takes but what He gives.

Ne'er trod the earth a purer soul
Than he, upon whose early bier
I lay unworthy tribute here;
Nor, while the stream of life shall roll,
On earth at least I hope to find
A youth of more exalted mind
Than he, whom God hath called away
To grace the lovely lands of never-dying day!

D. R. W.

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